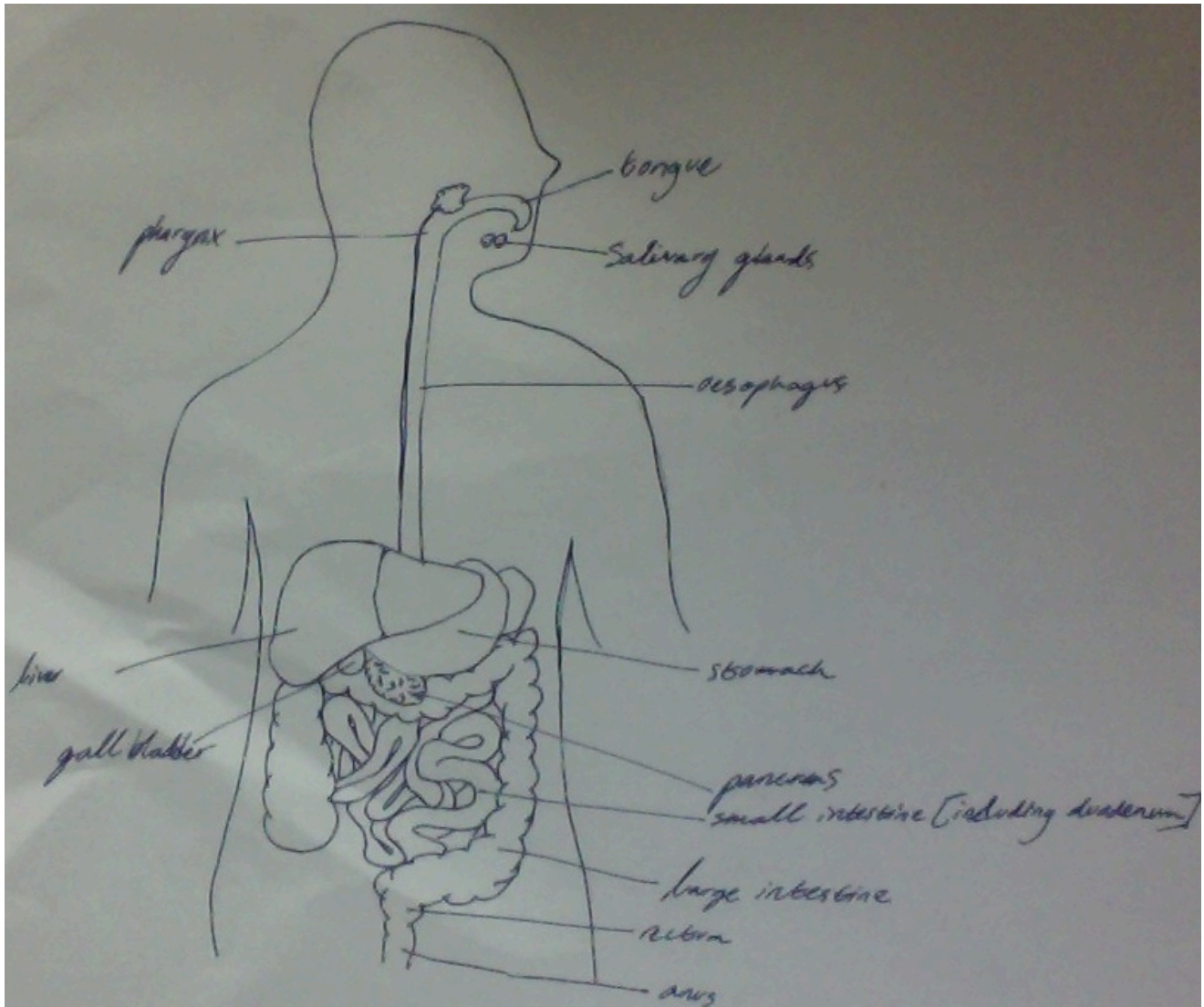


The Digestive System

The different organs within the digestive system interact to take food in and break it down, absorb nutrients into the body, and excrete solid waste.

**organs italicized and bolded*

- System's process begins in the mouth
 - Teeth mechanically break down food
 - **Salivary glands** produce saliva that contains the enzyme amylase, which chemically breaks down the food
- Then the food is swallowed
 - Goes through the **pharynx**, which sends the food to the next organ, the **oesophagus**
 - The **oesophagus** has muscular walls that contract and relax to push the food to the **stomach**
- Inside the **stomach**...
 - Gastric juices surround the food and chemically break it down
 - Mucus lines the stomach wall, protecting it from also being broken down
 - Nerves in the stomach's wall sense when there is food in the stomach and tell the stomach's muscle tissue to mix up the food, mechanically breaking it down
 - The sphincter is a small muscle at the bottom of the stomach that relaxes to send some of the stomach contents to the **small intestine**
- The **duodenum** (the first metre of the small intestine)
 - The **pancreas**, **liver** and **gall bladder** connect to the **duodenum** and release enzymes into the **duodenum** to chemically break down the food
 - The **liver** makes bile and the **gall bladder** stores that bile
 - Bile breaks down fat
 - The **pancreas** breaks down the fat further
- To the next part of the **small intestine**...
 - This part of the **small intestine** is covered with millions of villi and microvilli
 - Sort of like hairs on the wall
 - These drastically increase the surface area
 - Increased surface area = more water and nutrients to be absorbed into the bloodstream through the **small intestine** wall
 - **Small intestine** connects to the **large intestine** where the food is then sent
- The **large intestine**...
 - Absorbs water, vitamins, and salts from the food
 - Contains bacteria, which finish breaking down food and make essential nutrients
 - Excretes undigested food ~ **large intestine** is the last organ in the digestive system's process



Questions:

1. What part of this process do you think takes the most time to complete? Why?
2. What stages of this process include chemically breaking down the food? Which include mechanically breaking it down?
3. What behaviour/habits can you think of that might interfere with the digestive system?